Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

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Inquiry Concerning the Deployment of)	ALMANDE OF LIFE CHARGES AS		
Advanced Telecommunications)			
Capability to All Americans in a Reasonable)			
and Timely Fashion, and Possible Steps)	CC Docket 98-146		
to Accelerate Such Deployment)			
Pursuant to Section 706 of the)			
Telecommunications Act of 1996	}			

COMMENTS OF MINDSPRING ENTERPRISES, INC.

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EXECUTIVE SUMMARY

MindSpring is one of the nation's leading Internet Service Providers, with a particular focus on residential and small business customers. We and other ISPs have lead the explosion in commercial Internet services by creating easy and economical means for customers to access the Net. We have been able to do so because, in today's circuit-switched narrowband world, end users can reach us easily on a dial-up basis over the only two-way local loop, the ILEC circuit-switched facility.

The challenge for the Commission is to preserve the benefits of this "Open Systems World" as new broadband, high speed packet-switched local connections are deployed to the nation's homes and offices. MindSpring strongly supports this change, and we agree that "always on" packet connections will be the primary local loop of the future. Section 706 itself mandates "Open Systems" by linking deployment to the promotion of competitive choice for consumers.

Unfortunately, however, for at least the next five to seven years (and perhaps indefinitely) high speed connections to most homes and businesses will run over the wireline plant of the ILEC or cable operator. It is not even clear that ILECs and cable operators will be equally suited to deploy broadband in all areas. But in any event, the number of broadband loops to a premise will typically be none, one, or perhaps two.

As a result, there is a serious danger that loop owners will exercise their control of local broadband lines to restrict competition. They may completely deny use to independent (i.e. non-last-mile-owning) ISPs. Or they may achieve the same

practical result through discrimination against unaffiliated ISPs regarding the terms and conditions for use of the broadband local pipe.

Last mile problems are not new; the loop always has been the source of market power for the loop owner. However, this problem takes on a different and even more serious cast as we anticipate how a broadband loop will link customers to the Internet.

"Open Systems" are needed in a broadband world for at least three key reasons. First, as discussed above, the Commission must preserve the ability of ISPs and other non-last mile owners to drive technology innovation. Experience has shown that the exchange telephone and cable industries have been slow to participate in the Internet world, whether because of inertia, fears that the Internet might cannibalize their businesses, or other problems.

Second, ISP competition is necessary to ensure that customers have choices with respect to the key parameters of price, service design, and customer support. MindSpring would particularly emphasize the latter. To date ISPs have helped connect individual computers to the developing applications of the Internet. This role is complicated enough to make customer support far more significant than it has been in a conventional telephony world. But support will be even more important in the future as ISPs help customers use the broadband packet loop to provide connectivity for a collection of devices in the home or office, ranging from phone-like equipment to two-way video tools, monitoring, and other advanced applications not yet imagined. Indeed, MindSpring suggests that as we evolve to a

broadband world, today's ISPs will evolve into "Connectivity Service Providers" with a broad function to help consumers take full advantage of all packet-switched applications made possible by the Internet.

Third, "Open Systems" are important because the broadband local loop will be the path over which Americans will access much of their future information content. Internet gateway providers have an increasingly active role in helping customers process information and reach content — through the choice of primary search engines, blocking and filtering tools (including the selection of default gateway features), preferential visibility to links for particular web sites, or provisioning of their own content. It is important to recognize that these decisions are editorial in nature. The nation has a strong interest in maintaining low entry barriers so that the local loop owner cannot exercise disproportionate power over content matters, advancing its own editorial perspectives.

The Commission has recognized that loop owners historically have had strong incentives to favor their own service affiliates to the detriment of independent firms. This is no less the case here. The owner of the broadband loop will have a natural incentive to discriminate against other vendors requiring use of the facility to offer services that compete with the loop owner itself.

The Commission should reject arguments that last mile loop owners deserve the right to exploit their market power as an incentive to deploy broadband network. ISPs are eager to become paying customers for high speed loop capability. We already have many millions of customers that we would encourage to migrate to

broadband connectivity. We are prepared to pay reasonable prices. If the last mile were competitive, we would be seeing operators voluntarily building open broadband networks to meet this demand. In the absence of such market forces, the Commission must ensure that loop owners do not unfairly favor their own affiliates and create a "Closed System World."

As noted above, we will not see competitive broadband loops soon.

MindSpring has actively investigated wireless and other last mile options. The unfortunate truth is that none of these technologies are close to offering a viable broadband, two-way path for advanced services. Some of them depend upon a dial-up return path that by definition fails to meet requirements for two-way broadband and "always on" service applications. Wireless may meet certain specialized needs today, and the technology may improve in the future. But at least for the next five to ten years it will not be competitive with wireline facilities.

The question then becomes how the Commission will preserve an "Open Systems World" as high speed packet networks are deployed at the local exchange level. MindSpring does not yet have a fixed view on this subject, and different tools may be appropriate for different categories of last mile operators.

One option that has been used in the past is structural separation or absolute line of business restrictions. In principle, last mile loop owners could be prohibited from offering Internet access and related packet-switched services themselves.

They would then have the maximum incentive to make their facilities as open as possible. Alternatively, structural separation may be acceptable in some cases.

MindSpring recognizes that one version of separation is under consideration in the associated NPRM in connection with ILECs, and one could consider this approach more generally for the last mile owners.

A second option might be to address "Open System" goals through rules requiring high speed loop owners to sell broadband transport capacity connecting an end user premise to any ISP on an equal access-type basis. MindSpring recently entered into such an arrangement with a competitive cable company that could serve as a model for this approach. MindSpring interconnects with a router at the cable headend, and the cable operator transports data packets over its HFC network to and from the customer premise. Unfortunately, however, there is no reason to expect most last mile companies to accommodate unaffiliated ISPs on a non-discriminatory basis. Some regulation of the last mile loop owner would be necessary to keep the Internet services market competitive and unregulated.

Third, some have suggested that the answer might come from the purchase of last mile unbundled network elements. MindSpring agrees that CLECs must be able to create local broadband networks using ILEC elements. We also agree that it is worth considering interconnection rules in the context of cable plant, especially if that plant proves more suitable for the provision of broadband services in some locations than the ILEC network. However, the Commission must take care that an ISP does not have to assemble and operate local network facilities (with all the special technical skills that demands) in order to provide competitive ISP services.

In short, the transition to local networks with advanced telecommunications capability must not be accompanied by contraction in the competitiveness of the Internet industry. The market power of the last mile owner must be addressed sufficiently to preserve innovation, competition in services and customer support, and information diversity.

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COMMENTS OF MINDSPRING ENTERPRISES, INC.

MindSpring Enterprises, Inc. ("MindSpring") submits its comments here in response to the Commission's Notice of Inquiry ("Notice") in the above-captioned proceeding, FCC 98-187 (released Aug. 7, 1998).

INTRODUCTION

MindSpring is one of the nation's leading Internet Service Providers, with a particular focus on residential and small business customers. The company started as a local ISP in Atlanta in 1994, and has grown to become regional and now national in scope. MindSpring currently serves over 400,000 customers in 45 states, and employs over 650 people. MindSpring has consistently earned top marks for quality of service and customer satisfaction. It was named the ISP with the best customer support by *PC World* magazine in December 1997.

MindSpring congratulates the FCC for its thoughtful Notice, which recognizes that we are in the early stages of a societal transformation based on the Internet, advances in packet switching technology, and other computer-driven applications. MindSpring and other ISPs are proud to be playing a major role in this revolution. We are the ones who have driven the commercialization of the Internet by making it widely and easily accessible to consumers.

This role will become even more important in the future. Large corporations will have their own information technology professionals. But individuals and small businesses will require outside assistance establishing and using the "advanced capability" that this Notice anticipates. ISPs will address this need by evolving into what might be called "Connectivity Service Providers" or "CSPs." They will help consumers connect to and take maximum advantage of high speed, "always on" two-way packet networks so that the full promise of the Internet can be achieved.

Our comments here begin by discussing what we expect is a common goal: preservation of "Open Systems" and competitive choice. We then discuss the role independent ISPs 1/already play in promoting innovation, better services and support, and information diversity. We explain the danger that last mile owners may instead create a concentrated "Closed System" world by exploiting their control of the physical link to the home or office to deter competition to their own services.

^{1/} By "independent ISP" we mean every ISP <u>except</u> those that are affiliated with owners of last mile loops to customer premises. These range from the smallest local operator to affiliates of large interexchange carriers.

And finally, we discuss some of the actions the Commission should consider to preserve competitive ISP (and later CSP) choice.

I. SECTION 706 REQUIRES PRESERVATION OF AN "OPEN SYSTEM WORLD" AS THE LAST MILE CHANGES FROM NARROWBAND TO BROADBAND.

MindSpring strongly believes that this proceeding should focus on the problem of the last mile. The local loop is the one element of the telecom network that remains to be upgraded for advanced telecommunications. More important, the loop has been the historical source of bottleneck market power -- and practical realities dictate that this problem will continue as the two-way local network converts from circuit-switched narrowband to packet-switched broadband. The last mile owner will continue to stand between the end user and any party that needs to communicate with that customer.

The Commission's challenge here is to ensure that consumers will continue to enjoy a broad diversity of competitive choice and information supply as the Internet and other packet-switched applications mature. The Internet's exponential growth has resulted from the innovative actions of hundreds of ISPs and other firms. It is these firms, and not the established local telephone and cable companies, who have pioneered the development of practical, efficient, and in particular open systems to connect end users to this new information and communication resource.

MindSpring would expect most parties to share a common vision of how the world should look in the future. In that world many firms would compete vigorously to offer customers their communications, information, monitoring and other packet-switch-based applications and services. Market entry would be relatively simple so that new innovations could be presented and sold to consumers as rapidly as they are developed. This "Open System World" would be largely unregulated because market forces would drive lower prices and better services and support. An "Open System World" also would preserve the information diversity that characterizes the Internet today. Customers could choose among dozens of companies who compete in part based on how they organize, search, filter and present Internet content -- again, with no need for governmental oversight.

One reason the nation enjoys the benefits of "Open Systems" today is that, in a narrowband environment, dial-up access is adequate for most applications. 2/ Consumers can access the service provider of their choice by placing a telephone call, a call that the phone company may not block. As the Notice recognizes, however, narrowband access over conventional local exchange lines is inherently limited. MindSpring agrees that the nation has a strong interest in the timely deployment of broadband, high speed packet-switched local connections to the nation's homes and offices. We agree that such "always on" connections will become the primary local telecom offering in the future. Indeed, we expect more and more applications -- including new unimagined applications -- to migrate to

Z/ This is not to suggest that narrowband dial-up access has been sufficient for all purposes. As modems and other technology has advanced, certain business end users are increasingly willing to purchase higher speed dedicated access to the Internet. But the broadband capability contemplated by the Commission's Notice is qualitatively and quantitatively different.

this broadband network, eventually totally replacing the circuit switched network of today.

Unfortunately, however, it is by no means inevitable that the "Open System World" we enjoy today, and that we want in the future, will survive the transition to broadband local loops. There is a serious danger that instead consumers will be faced with a "Closed System World," with their service options limited to those offered by (or permitted to be offered by) the owner of the last mile broadband loop. Such a "Closed System World" would have profoundly negative implications. It would threaten the competition and innovation that have driven Internet and other advances to date — consumers would pay higher prices and receive inferior service. And a "Closed System World" threatens the very information diversity that the Internet has unleashed. Put simply, the nation should not care how consumers interface with the Internet if they can choose among competing ISPs offering different content, search engines, and controls. But we should care a great deal if one, or two, or even a small handful of firms are the primary gatekeepers to the Internet.

An "Open System World" is completely consistent with the express mandates of Section 706 of the Telecommunications Act. The Act directly links the deployment of advanced telecommunications capability with the importance of ensuring that such capability advances competitive choice for consumers. 3/

^{3/} For example, the Act asks the Commission to accelerate deployment of advanced telecommunications capability to "all" Americans "by removing barriers to infrastructure investment and by promoting competition in the telecommunications

"Advanced telecommunications capability" itself is defined as capability that "enables users to originate and receive high-quality voice, data, graphics, and video telecommunications." 4/ In short, the purpose of Section 706 is to create an environment in which end users (not last mile loop owners) can decide for themselves what applications and what vendors they will access over the next generation telecommunications network.

An "Open Systems World" also is required by Section 230(b) of the Telecom Act. That provision affirms a national policy to preserve the vibrant competition in Internet services that exists today:

It is the policy of the United States to promote the continued development of the Internet and other interactive computer services and other interactive media [and] to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation. 5/

But this "vibrant competition" has been possible only because last mile owners have not been able to exercise market power to deny consumers the ability to reach ISPs on an "Open Systems" basis.

Unfortunately, the market power of loop owners is likely to increase in a broadband environment because they can more easily discriminate against

market." Pub. L. 104-104, Title VII § 706(b)(emphasis added), 110 Stat. 153, reproduced in notes under 47 U.S.C. § 157 (hereafter cited as § 706).

 $[\]underline{4}$ / \underline{Id} ., § 706(c)(1) (emphasis added).

<u>5</u>/ <u>Id</u>., § 230(b).

unaffiliated ISPs and other non-last-mile owners. For at least the next five to ten years (and perhaps indefinitely), the primary high speed packet connection to homes and small businesses will run over the wireline plant of the ILEC or the cable operator. While wireless alternatives may exist in the future, they do not exist today. In particular, it remains to be seen whether it is practical to create two-way broadband wireless alternatives. So long as wireless broadband requires a dial-up return path, it will not be sufficient in a world that is moving to "always on" functionality and applications. Furthermore, some experts project that even two-way wireless broadband only could be efficient and competitive in less dense geographic areas where it is too expensive to upgrade wireline networks. 6/

MindSpring does not argue that wireless systems will play no broadband role in the future — particularly if the "future" is defined as far enough into the next decade. Specialized business applications may arise sooner. But in the meantime, broadband connectivity will be provided first and foremost over wire, especially to homes and small businesses. It follows that the Commission should particularly focus on wireline issues as it considers Section 706's mandate for "deployment of advanced telecommunications capability to <u>all</u> Americans in a reasonable and timely fashion." 7/

We as a society effectively face a choice. Either we rip up neighborhoods to install a new set of wires every time we want to add a new

^{6/} See Section III(C), infra.

^{7/ 47} U.S.C. § 706(a) (emphasis added).

competitor to the market, or we find an efficient way to share the wires that are in place. Just to state the point is to answer it. It is obviously impractical and uneconomic to deploy multiple broadband loops. So the primary question is how to ensure the continuation of today's "Open System World" when only one or two (or maybe three) broadband loops reach a typical customer premise. A key focus of this proceeding must be on how to ensure that local broadband capability is shared among all potential service providers -- rather than become a source of market power blocking consumers from the full benefits of the Internet and other advanced applications. 8/

As discussed below, MindSpring would firmly reject any suggestion that the FCC must reward broadband loop owners with dominant market power as an incentive to encourage investment. Strong demand for broadband already exists, not least of all from ISPs like us. If loop owners are fairly compensated for the use of their facilities, they should be expected to deploy them. MindSpring supports the Commission's proposals to modify its interconnection rules to make it easier for CLECs to deploy broadband loops using ILEC network elements. 9/ We

^{8/} In that regard, "Open Systems" clearly will be necessary even if one assumes that eventually one or two broadband wireless loops will become technological and economic substitutes for the one or two wireline last mile facilities. It is only incrementally better for three or four last mile owners to stand between customers and advanced services vendors, than for one or two loop owners. Thus, policies to promote open access to last mile facilities will have a continuing vitality for the indefinite future.

^{9/} Deployment of Wireline Services Offering Advanced Telecommunications Capability, Memorandum Opinion and Order and Notice of Proposed Rulemaking, CC Docket No. 98-147, FCC 98-188 (released Aug. 7, 1998)("Wireline Services NPRM").

also support consideration of other tools to require the ILECs themselves to make high speed loops available on a carrier's carrier basis. And we believe that the Commission's recent report on <u>Internet Over Cable</u> opens a very useful inquiry into the role of cable plant in promoting diverse advanced telecommunications. <u>10/</u>

MindSpring recognizes that the Notice only sounds the starting gun for a vital dialog over how to bring advanced services to the nation's homes and businesses. Our comments here are necessarily preliminary. However, we hope that all parties will agree that an "Open System World" is mandated by Section 706 and strongly in the public interest. With that foundation, it should be possible to develop policies to share the nation's common wireline investment as it evolves from a narrowband to a broadband "network of networks."

II. INDEPENDENT ISPS ARE CRUCIAL TO THE FUTURE OF BROADBAND SERVICES AND AN OPEN INTERNET.

A. The Coming Evolution of ISPs Into "Connectivity Service Providers."

MindSpring anticipates that other parties will be discussing their own services, and how such services will benefit from the deployment of high speed packet switched local loops. The Commission also should keep in mind the "silent parties" with an equal interest in this proceeding — the developers of <u>future</u> broadband applications not yet invented, and the millions of consumers who will

^{10/} B. Esbin, Internet Over Cable: Defining the Future in Terms of the Past, OPP Working Paper Series No. 30 (August 1998)(hereafter "Internet Over Cable").

benefit from those new technologies. When the Commission preserves an "Open System World," it will do so on behalf of the many new applications that inevitably will arise once broadband last mile facilities are available.

As an independent ISP, MindSpring speaks for both the present and the future. We view our job as helping homes and small businesses quickly and easily make use of the evolving Internet and related information systems. In that sense, we are evolving along with the technology from an Internet access service provider to a "Connectivity Service Provider." A connectivity service provider's role may extend well beyond what we currently think of as "the Internet", as new applications develop and telephony also migrates over time to the packet-switched network. We envision a CSP as a firm that helps move new IT applications into widespread use, and helps end users interface with the content and capability of the Internet in its expanding form.

Put another way, today an ISP's primary role is to support single computer connectivity. But tomorrow a "Connectivity Service Provider" will support a home or small business "LAN" with a whole variety of devices and applications sharing the packet "Internet" loop. Over time this LAN may link phone-like equipment, video cameras and screens, new web browsing and e-mail capable tools, appliance controls, energy monitoring and security systems, and other tools we cannot even imagine today. Nor can we anticipate just how much these devices may end up integrated with one another.

Thus, whether one speaks of an ISP or a CSP, the importance of an Open System World is reinforced by the increasing complexity of an "always on"

high speed data world. Consumers will have an even greater need for choices in obtaining connectivity to advanced services.

B. The Importance of Low Entry Barriers for Independent Providers.

MindSpring and other independent ISPs are "Exhibit 1" demonstrating the crucial importance of preserving low entry barriers for innovative new firms in the Internet connectivity market. Only then will "all Americans," to use the language of Section 706, continue to enjoy technology innovation, service competition, and true information diversity.

1. Technology Innovation.

The innovative role of independent ISPs cannot be disputed. Put simply, if the nation had to depend upon current last mile owners to bring us commercial access to the Internet, we would still be waiting. The local telephone and cable industry have not been important innovators or leaders in the Internet in any respect. Even now, several years after the revolutionary significance of the Internet to their own future businesses has become apparent, last mile owners remain essentially non-players in the Internet access field. They make many announcements for the press, but the reality is that of the total of approximately 25 million Internet access customers, only a small percentage are served by either ILECs or the cable industry. 11/

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^{11/} See Internet Over Cable, at 18.

In short, independent ISPs have lead the explosion in commercial Internet services by creating efficient, easy and economical means for customers, including residential and small business customers, to access the Net. The Commission does not need to decide here why the established last mile owners have been so slow to participate. Undoubtedly this in part reflects their natural inertia, in part their distraction by other issues, and in part a concern that the Internet could cannibalize parts of their existing businesses. But whatever the reason, the history of the Internet demonstrates how "Open Systems" in a narrowband world have permitted innovation to flourish.

ISPs and other non-last mile owners will continue to drive new technology and services in the future — at least provided that they can reach their customers over the new broadband loops on reasonable terms. We can already see new firms exploring Internet telephony that could replace conventional switched network services, and see resistance to these developments by the ILECs.

Similarly, content providers are envisioning a future in which they can stream video and audio services to customers over the Internet, sidestepping cable operators who select program options for consumers today. These developments are forcing competitive responses by the established wireline companies, to the benefit of consumers. But it will be crucial to develop "Open System" principles so that the innovation of the past five years does not come to a grinding halt due to actions by broadband loop owners to close off access to their facilities.

2. Service Competition and Customer Support.

Even leaving aside innovation concerns, customers must continue to enjoy multiple competitive alternatives for connecting to the Internet. Today, thanks to the low entry barriers for ISP service, the market offers customers different options with respect to the key parameters of price, service quality, and ongoing support. MindSpring believes that these areas of product differentiation will become even more important in the future as the capacities of the Internet and packet-switching continue to advance, and as ISPs evolve into CSPs.

MindSpring, for example, has chosen to build its residential and small business products around three core objectives:

- 1. We specialize in providing customers with an easy start up experience. This includes supplying software that loads well to get customers connected, and an intuitive interface that helps them launch effectively and find things that will be useful for them on the Internet.
- 2. We invest to ensure that our network is available, reliable and high performance. We maintain sufficient ports and lines so that the customer can be assured of reaching the Internet without blocking problems or other delays.
- 3. We place a particular priority on ongoing customer support. We realize that our customers are not IT professionals. We add value by helping them take full advantage of the Internet and other packet-switched products.

Other ISPs offer different pricing, different network reliability, and different levels of support. We are not necessarily the cheapest provider, but our success with customers demonstrates that our service mix is very attractive. However, competitive pressures mean that we must always stay on our toes.

As packet-based technology develops, customers will have an even greater interest in a market structure that maximizes both the number of vendors and the competitive pressures on those vendors. They will want vendors who are nimble and creative in helping bring IT applications from the drawing board into the home or office, and then help make sure those applications work easily and reliably. Support already is far more important in our ISP business than it has been in any telecom business in the past. We are dealing with relatively complex applications, upgrading over time, in a world where the technology building blocks are imperfect. When problems occur, it can be difficult to identify whether the problem lies with the personal computer, modem, phone lines used for data transmission, the Internet itself, or the customer's skills. ISPs such as MindSpring specialize in helping the customer through these issues.

Customer support will become even more complicated and important in the advanced telecom world ahead, as devices and applications over the "Internet" connection expand. In fact, customer support may become the most important piece of economic value added by an ISP/CSP in the residential and small business markets. As only one example, the varied applications of the future will be more demanding on the network side. Some applications will require virtual private network features. Some such as voice and video-conferencing will require higher quality of service handling through the backbone. If customers have a choice of ISPs, they will be able to choose an ISP that provides them with the (non-last mile) network services that they value and are willing to pay for.

MindSpring has discussed customer support in this detail because it is so central to our culture, and because we earn top marks for customer satisfaction in industry surveys. 12/ While we do not want to criticize particular ILECs or cable companies, it is enough to note that their reputations for customer service often are lacking. There is a danger that if customers have to rely on the last mile loop owners for support in operating the new telecom products of the future, those products may be very slow to become available — especially in the residential and small business markets. At the least, however, customers should have market-driven choices with respect to service options, price, quality and customer support.

3. Information Diversity.

Low entry barriers for independent ISPs also are critical because in the future broadband loops will be the path over which Americans access much of their information content. Today's ISP already is the gateway to the Internet and the customer's first point of contact with the web. The Internet has multiplied information diversity exponentially, with users connecting directly to web sites themselves on a relatively open basis. But already gateway providers have an increasingly active role in this process: through the choice of primary search engines, blocking options and filters (including the selection of the default gateway features), preferential visibility and links for particular web sites, or provisioning of their own content.

^{12/} As noted previously, in December 1997 MindSpring was named the ISP with the best customer support by *PC World* magazine.

This development is positive so long as many ISPs can compete on equal terms for a customer's business. ISPs will be able to position themselves to offer different gateway features and meet different market niches. For example, ISP A might give special visibility to one news source or political viewpoint, while ISP B promotes another and ISP C promotes a third. Or ISP X may offer active and continuously updated filters of certain content classes as the basic default (with those defaults hard for children to change), while ISP B may filter narrowly and ISP C might choose not to block anything. The market can decide which of these diverse options succeed or fail. 13/

However, it is crucial to appreciate that these ISP gateway decisions are inherently editorial in nature, and therefore have potentially profound implications. If a broadband loop owner can exercise power to discriminate against competing ISPs, then information diversity could be threatened. The loop owner would have incentives and ability to steer customers to its own gateway, with its own selection of content, blocking defaults and other information-related features. That loop owner therefore may exercise disproportionate power over content matters, advancing its own editorial perspectives and discriminating against unaffiliated ISPs with a different viewpoint.

At the least, the Commission will need to make sure that the loop owner does not unilaterally block its customer's access to particular web sites.

^{13/} This ISP diversity also protects against any one Internet gateway exerting market power over advertisers who want to get special priority in front of customers.